



100 Declaration  
S. Ummerer

PATENT

I hereby certify that on the date specified below, this correspondence is being deposited with the United States Postal Service as Express mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

July 17, 2003  
Date  
Joanne Bourguignon  
Joanne Bourguignon  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Ted Eugene Wright  
Application No. : 09/499,069  
Filed : February 4, 2000  
For : SINGLE-SHEET REGISTRATION FORM AND KEY PACKET

Examiner : Monica S. Carter  
Art Unit : 3722  
Docket No. : 35008.0001  
Date : July 17, 2003

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

DECLARATION OF TED EUGENE WRIGHT

Sir:

I hereby provide correspondence, lab results, and commercial-printer-manufacturer publications and guidelines detailing the complex and stringent requirements which a SINGLE-SHEET REGISTRATION FORM AND KEY PACKET, as claimed in claims 1-7 and 11-21, must meet in order to be used in the commercial applications for which it was designed. As demonstrated by the enclosed exhibits, many characteristics and parameters need be considered, and the SINGLE-SHEET REGISTRATION FORM AND KEY PACKET must be carefully designed, to be reliably printed in commercially available computer printers.

EXHIBIT 1 - An email from a major customer detailing deficiencies in paper used for one version of the SINGLE-SHEET REGISTRATION FORM AND KEY PACKET, as claimed in claims 1-7 and 11-21.

EXHIBIT 2 - Lab results from Hewlett Packard referenced in the email provided as EXHIBIT 1.

EXHIBIT 3 - An email from a major customer detailing changes needed in a version of the SINGLE-SHEET REGISTRATION FORM AND KEY PACKET, as claimed in claims 1-7 and 11-21 for compatibility with printers used by the major company.

EXHIBIT 4 - Specification and Guidelines for paper used for printing in Hewlett Packard printers.

Inventor:

Ted Eugene Wright  
Ted Eugene Wright

5-20-03  
Date

Lab results

nt

Larry Outland [Larry\_Outland@hilton.com]

Sent: Thursday, November 14, 2002 8:35 AM

To: 'efplus@aol.com'; 'Ted Wright at EF Plus'

Subject: FW: Hilton Paper Lab results

Ted:

I hope I got your e-mail correct, below are documented results of the lab test on the paper you sent. I have also left you a voice mail to call me.

Additionally, here is the reply to the question about servicing our printers.

Larry,

The paper that Hilton is using can not be printed from tray 2. The paper path that would need to be used for the E-forms paper is from Tray One to the rear output bin. This will give the paper the straightest path possible.

The media guidelines of the printer need to be met. Thicker media, perforations, and cut outs can wear parts of the printer causing jams or damage to the printer. The 32# stock that you are using is outside the specifications for tray 2. Tray one can print using 32# but perforations, cut-outs may cause additional issues with jamming or damage to the printer. This would not be covered by the contract or warranties.

Shane C

-----Original Message-----

From: "CHESNUT,SHANE (HP-Boise,ex1)" &lt;shane.chesnut2@hp.com&gt;@INTERNET@HHC

Sent: Wednesday, November 13, 2002 12:23 PM

To: Larry Outland

Cc: BURSI,MIKE (HP-USA,ex1)

Subject: Hilton Paper Lab results

Larry,

Here are the results from the paper lab on the Electronic Forms you sent me. There are a few recommendations as well as information taken from the users guide for the printer. I am also including a copy of the print media guide from HP.

Thank you for your assistance.

Shane Chesnut

FW: Hilton Paper Lab results

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Page 2 of 2

Priority Programs Technical Support  
Hewlett-Packard Company  
11311 Chinden Blvd. Bld. 27 MS 2700  
Boise Id 83714

208-333-4422 Phone  
208-333-6429 Fax

- print media guide.pdf <<print media guide.pdf>>
- Evaluation of Hilton Media.doc <<Evaluation of Hilton Media.doc>>
- Hilton.pdf <<Hilton.pdf>>

Hewlett-Packard Company  
Paper Test Laboratory  
11413 Chinden Boulevard  
P. O. Box 15, M. S. 263  
Boise ID 83707-0015  
USA



Date of Report: November 11, 2002

Report Number: 1-2002-0535-1

HPContact: Shane Chesnut

Customer:

Hilton Hotel Corp.

MediaBrand: Unknown

MediaType: Specialty

Printer: LaserJet 2200TN

Problem Description: Jamming

Receipt Condition: Unsealed

Testing Conditions: 72.6F @ 25% RH

## PAPER TEST LABORATORY RESULTS REPORT

CATEGORY	PAPER GUIDELINES	RESULTS
Paper Dimension	Tray 1 Min: 3 x 5.5 Max: 8.5 x 14 Tray 2 Min: 5.8 x 8.2 Max: 8.5 x 14 Tray 3 Min: 5.8 x 8.2 Max: 8.5 x 14 Tray 4 Min: N/A Max: N/A Tray 5 Min: N/A Max: N/A Envelope Feeder Min: N/A Max: N/A Scanner Min: N/A Max: N/A Duplexer Min: N/A Max: N/A	Sample Tested: 8.50 x 14.0 inches
Basis Weight	Tray 1 60-163 g/m2 or 16-43 lb Tray 2 60-105 g/m2 or 16-28 lb Tray 3 60-105 g/m2 or 16-28 lb Tray 4 N/A Tray 5 N/A Envelope Feeder N/A Scanner N/A Duplexer N/A	Basis Weight: 119 g/m2 or 32 lb
Caliper Curl Cut Edge Condition Finishing Precision Grain Moisture Content Smoothness Surface Resistivity (as received) Surface Resistivity (conditioned @ 23C/50%RH) Volume Resistivity (as received) Volume Resistivity (conditioned @ 23C/50%RH)	3.5 to 6.5 mils for sheets In-ream: flat <= 5mm (0.197 in.) Cut w/sharp blades (no frayed edges) Cut sheet to within +/- 0.8mm of nominal (.03 in) Long Grain 4.0 to 6.0 % 30 to 350 Sheffield Not Specified 10 (9) to 10 (13) Ohms/Sq. Not Specified 10 (9) to 10 (14) Ohms-cm	6.0 mils 7 mm Smooth Edges 0.01 inches Long Grain 5.3 % 176/142 Sheffield 1.21 x 10(12) Ohms/Sq 3.83 x 10(12) Ohms - cm

### NOTE:

Testing is based on a single sample; results may vary significantly across a range of samples.

### Comments:

Ensure customer is using HP toner cartridges, fuser and consumables.

Sheffield variance of > 20 units side to side indicates a 2-sided paper, which may contribute to higher curl either before or after printing.

Side-to-side Sheffield difference ideally should be less than approximately 20 units, otherwise frictional properties could be affected.

Perforations can cause pages to bend downward and miss pickup points on the next rollers in the paper path.

Perforations in some cases may affect the stiffness of the sheet and can cause runnability problems.

Pre-printed media may have surface treatments that are not ideal for laser printing and may cause increased runnability issues.

## Evaluation of Hilton Media

The media specifications for the 2200 are in the Users Guide starting on page 133 and ending on page 144.

On Page 133 the Guide states: Paper that does not meet the guidelines outlined in this document can cause the following problems:

- ❖ Poor print quality.
- ❖ Increased paper jams.
- ❖ Premature wear on the printer, requiring repair.

Always test paper before buying large quantities.

A Note on the same page States: Some paper may meet all of the guidelines in this document and still not produce satisfactory results.

Caution states: Using paper that does not meet HP specifications may cause problems for the printer, repair. This repair is not covered by the Hewlett-Packard warranty or service agreements.

On page 135 the specifications for tray 2 show a maximum paperweight limit of 28#.

*\*\*The Electronic Forms sent to media evaluation is 32# media. HP's recommendations with this printer are:*

*The best paper path for this heavier media is in tray One manual feed tray sent to the rear output bin. Using tray Two may have no pick and jamming issues along with premature wear on the printer. Sending the media to the top tray may cause the output assemblies to fail. \*\**

In the section labeled **The Guidelines for using paper** page 137. The manual explains some issues and solutions. One is specific to perforations or cutouts.

On page 138 the required paper specifications are given.

The Paper Specifications Guidelines gives many different troubleshooting and media suggestions. The guide suggests testing small amounts of media.

The results to point out from the paper lab Media Evaluation are.

- ❖ Paperweight of 32# the 2200 can run 32# from tray 1 manual feed not tray 2.
- ❖ Curl is over the specifications.
- ❖ Sheffield is greater then 20 from front to back.

Comments given by the paper lab on the results were.

- ❖ Ensure customer is using HP toner cartridges, fuser and consumables.
- ❖ Sheffield variance of >20 units side to side indicates a 2-sided paper, which may contribute to higher curl either before or after printing.
- ❖ Side-to-side Sheffield difference ideally should be less than approximately 20 units, otherwise frictional properties could be affected.
- ❖ Perforations can cause pages to bend downward and miss pickup points on the next rollers in the paper path.
- ❖ Perforations in some cases may affect the stiffness of the sheet and cause runnability problems. (These runnability issues could be printers not picking up paper from tray, premature wear on printer, constant paper jams.)
- ❖ Pre-Printed media may have surface treatments that are not ideal for laser printing and may cause runnability issues.

**Ted Wright**

**From:** Scott Greenberg [Scott\_Greenberg@hilton.com]  
**Sent:** Friday, February 07, 2003 7:29 AM  
**To:** "'CHESNUT,SHANE (HP-Boise,ex1)" <shane.chesnut2@hp.com>@INTERNET@HHC';  
'MCCARTY,BEN H (HP-USA,ex1)" <ben\_mccarty@hp.com>@INTERNET@HHC'; 'Anthony J.  
Laciura'; 'LINO,RON (HP-USA,ex1)'; 'Ted Wright @ EFP'; 'efplus@aol.com'  
**Subject:** Designing form for Hilton Reg/Key Pack that will work with HP and Lexmark printers

Shane/Ron/Ben/Anthony/Ted,

After meeting with both Lexmark and HP this week, I have learned that the current form being used for Electronic Forms Registration/Key Packets is outside of the model parameters for the HP2200d/HP2300d and Lexmark T420 printers.

I would appreciate help from the Lexmark and HP organizations in finding a solution to this issue.

We need to redesign the form that we are using to work on a paper stock that will not cause issues with our printer warranties but will still work for our operations and our brands.

I am looking for help in coming up with a weight of paper that will work (even with the die cut and perforations) and can be tested by Lexmark and HP as acceptable to use going forward.

While I understand that a move to Tray 1 of these printer models is preferred (to lessen the curves the paper needs to go through), we are still concerned about the use of the drop down tray from an operational perspective (sticks out of the desk, gets bumped by knees, doesn't hold as many sheets).

I would like to start by looking at the options for paper that would still work in Tray 2.

Ted, could you please work with Anthony (714-931-8547) at Lexmark and Shane (208-333-4422) at HP to coordinate the efforts with both companies.

Anthony and Shane, I would ask that you be the coordinators for the people within your organizations.

Since we use some of each brand today, we need a solution that will work for both companies' products.

Thank you,  
Scott

[Control Panel Simulator](#)[Print the Manual](#)[Customer Care Information](#)

Media Specifications

## Media Specifications

### Overview

This printer accepts a variety of media, such as cut-sheet paper (including up to 100% recycled fiber content paper), envelopes, labels, transparencies, and custom-size paper. Properties such as weight, composition, grain, and moisture content are important factors affecting printer performance and output quality. Paper that does not meet the guidelines outlined in this manual can cause the following problems:

- Poor print quality.
- Increased paper jams.

Premature wear on the printer, requiring repair.

**Note** Some paper may meet all of the guidelines in this manual and still not produce satisfactory results. This might be the result of improper handling, unacceptable temperature and humidity levels, or other variables over which Hewlett-Packard has no control. Before purchasing large quantities of paper, make sure the paper meets the requirements specified in this user guide and in the *HP LaserJet Printer Family Print Media Guide*. (For ordering information, see Supplementary Documentation). Always test paper before buying large quantities.

**CAUTION** Using paper that does not meet HP specifications may cause problems for the printer, requiring repair. This repair is not covered by the Hewlett-Packard warranty or service agreements.





## Media Specifications


[Control Panel Simulator](#)
[Print the Manual](#)
[Customer Care Information](#)

## Guidelines for Using Paper

For best results, make sure the paper is of good quality, and free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, voids, and curled or bent edges.

If you are unsure what type of paper you are loading (such as bond or recycled), check the label on the package of paper.

The following problems with paper cause print quality deviations, jamming, or even damage to the printer.

Symptom	Problem with Paper	Solution
Poor print quality or toner adhesion Problems with feeding	Too moist, too rough, too heavy, too smooth, or embossed; faulty paper lot	Try another kind of paper, between 100-250 Sheffield, 4-6% moisture content
Dropouts, jamming, curl	Stored improperly Side-to-side variability of paper	Store paper flat in its moisture-proof wrapping Turn paper over
Excessive curl problems with feeding	Too moist, wrong grain direction or short-grain construction Side-to-side variability of paper	Open the rear output bin Use long-grain paper Turn paper over
Jamming, damage to printer	Cutouts or perforations	Do not use paper with cutouts or perforations
Problems with feeding	Ragged edges Side-to-side variability of paper	Use good quality paper Turn paper over

**Note** Do not use letterhead paper that is printed with low-temperature inks, such as those used in some types of thermography. Do not use raised or embossed letterhead. The printer uses heat and pressure to fuse toner to the paper. Make sure that any colored paper or preprinted forms use inks that are compatible with this fusing temperature (200° C or 392° F for 0.1 second).

## Paper Specifications

Category	Specifications
Acid Content	5.5 pH to 8.0 pH
Caliper	.094-.18 mm (3.0-7.0 mils)
Curl in Ream	Flat within 5 mm (.02 in.)
Cut Edge Conditions	Cut with sharp blades with no visible fray.
Fusing Compatibility	Must not scorch, melt, offset, or release hazardous emissions when heated to 200° C (392° F) for .1 second.
Grain	Long Grain
Moisture Content	4% to 6% by weight
Smoothness	100-250 Sheffield

For complete paper specifications for all HP LaserJet printers, see the *HP LaserJet Printer Family Print Media Guide*. For ordering information, see Supplementary Documentation.

